

AMENDMENTS TO THE CLAIMS

1. (Original) A method of fabricating a cleaved facet of a laser device, said device having a substrate and at least one GaN-based layer formed upon a first surface of the substrate, said method including the following steps:

- cutting linear grooves into a second surface of the substrate, said grooves being in alignment with vertical planes of said substrate; and
- cleaving said substrate and said at least one GaN-based layer along said vertical planes;

wherein said cutting is effected by a laser beam from an external laser source.

2. (Currently Amended) [[A]] The method according to claim 1, wherein the substrate is formed of sapphire.

3. (Currently Amended) [[A]] The method according to claim 2, wherein the sapphire substrate is formed of c-plane sapphire.

4. (Currently Amended) [[A]] The method according to claim 1, wherein the vertical planes are at least one selected from the group consisting of one or more of the m-planes (1100) and [[the]] a-planes (1120).

5. (Currently Amended) [[A]] The method according to claim 4, wherein the vertical planes are the a-planes (1120).

6. (Currently Amended) ~~[[A]]~~ The method according to claim 2, wherein ~~[[the]]~~ a thickness of the substrate is less than about 400 μm .

7. (Currently Amended) ~~[[A]]~~ The method according to claim 6, wherein the thickness of the substrate is between about 350 μm and about 400 μm .

8. (Currently Amended) ~~[[A]]~~ The method according to claim 6, wherein the grooves are cut to a depth of from about 40 μm to about 100 μm .

9. (Currently Amended) ~~[[A]]~~ The method according to claim 8, wherein the grooves are cut to a depth of from about 50 μm to about 80 μm .

10. (Currently Amended) ~~[[A]]~~ The method according to claim 8, wherein the depth of said grooves is controlled by process parameters including ~~[[the]]~~ an intensity of the laser beam, ~~[[the]]~~ a speed at which the laser beam is scanned over the grooves and ~~[[the]]~~ a number of times the laser beam is scanned over said grooves.

11. (Currently Amended) ~~[[A]]~~ The method according to claim 10, wherein the laser beam was focused on the second surface of the substrate within a radius of from about 20 μm to about 30 μm at $1/e^2$ density.

12. (Currently Amended) ~~[[A]]~~ The method according to claim 10, wherein ~~[[the]]~~ an average power of the laser beam is about 1.4W.

13. (Currently Amended) ~~[[A]]~~ The method according to claim 10, wherein ~~[[the]]~~ a repetition rate of the laser beam is from about 2 kHz to about 5 kHz.

14. (Currently Amended) ~~[[A]]~~ The method according to claim 10, wherein ~~[[the]]~~ a pulse width of the laser beam is from about 5 ns to about 30 ns.

15. (Currently Amended) ~~[[A]]~~ The method according to claim 10, wherein the laser beam is scanned over the second surface of the substrate from 2 to about 12 times at a velocity of about 1 mm/sec.

16. (Currently Amended) ~~[[A]]~~ The method according to claim 1, wherein the at least one GaN-based layer includes a plurality of GaN-based layers.

17. (Currently Amended) ~~A method according to claim 16, wherein the GaN-based layers are formed using epitaxial lateral overgrowth (ELOG) techniques~~ The method according to claim 16, wherein the plurality of GaN-based layers include GaN/InGaN/AlGaIn layers.

18. (Currently Amended) ~~A laser device having cleaved facets formed according to the method of claim 1~~ The method according to claim 16, wherein the GaN-based layers are formed using epitaxial lateral overgrowth (ELOG) techniques.

19. (Currently Amended) A laser device having cleaved facets formed according to the method of ~~any one of claims 1 to 18~~ claim 1.